

What is claimed is:

1. An electromagnetic wave absorber molding material used for making a molded element making up at least part of an electromagnetic wave absorber, the molding material including a magnetic material, an inorganic
5 fiber and an inorganic binder, the molding material first exhibiting fluidity when the magnetic material, the inorganic fiber and the inorganic binder are mixed with water, and then exhibiting a curing reaction in a temperature range of approximately 1 to 40 °C inclusive.
- 10 2. The molding material according to claim 1, wherein the inorganic binder includes soluble alkaline silicate and zinc borate.
3. The molding material according to claim 1, wherein a proportion of the inorganic binder in the molding material falls within a range of
15 approximately 8.0 to 13.0 weight % inclusive.
4. The molding material according to claim 1, wherein the inorganic fiber has a length in a range of approximately 20 to 150 μm inclusive, and a proportion of the inorganic fiber in the molding material falls within a range
20 of approximately 2.0 to 7.0 weight % inclusive.
5. The molding material according to claim 1, wherein a proportion of the magnetic material in the molding material falls within a range of approximately 80 to 90 weight % inclusive.
- 25 6. An electromagnetic wave absorber molded element made of a molding

material and making up at least part of a wave absorber, wherein

the molding material includes a magnetic material, an inorganic fiber
and an inorganic binder, and

the molding material first exhibits fluidity when the magnetic material,
5 the inorganic fiber and the inorganic binder are mixed with water, and then
exhibits a curing reaction in a temperature range of approximately 1 to 40 °C
inclusive.

7. The molded element according to claim 6, wherein the inorganic
10 binder includes soluble alkaline silicate and zinc borate.

8. The molded element according to claim 6, wherein a proportion of the
inorganic binder in the molding material falls within a range of
approximately 8.0 to 13.0 weight % inclusive.

15 9. The molded element according to claim 6, wherein the inorganic fiber
has a length in a range of 20 to 150 μm inclusive, and a proportion of the
inorganic fiber in the molding material falls within a range of approximately
2.0 to 7.0 weight % inclusive.

20 10. The molded element according to claim 6, wherein a proportion of
the magnetic material in the molding material falls within a range of
approximately 80 to 90 weight % inclusive.

25 11. The molded element according to claim 6, having such a shape that a
proportion of the molded element occupying a space of unit volume increases

from a wave-incident side end of the element to the other end.

12. The molded element according to claim 11, being wedge-shaped or pyramid-shaped.

5

13. The molded element according to claim 6, having a surface to which coating is applied.

14. A method of manufacturing an electromagnetic wave absorber
10 molded element made of a molding material and making up at least part of an electromagnetic wave absorber, wherein

the molding material includes a magnetic material, an inorganic fiber and an inorganic binder, and

the molding material first exhibits fluidity when the magnetic material,
15 the inorganic fiber and the inorganic binder are mixed with water, and then exhibits a curing reaction in a temperature range of approximately 1 to 40 °C inclusive,

the method comprising the steps of:

injecting slurry into a mold, the slurry being obtained through mixing
20 the molding material with water;

curing the slurry injected into the mold to form the molded element; and taking the molded element out of the mold.

15. The method according to claim 14, wherein the inorganic binder
25 includes soluble alkaline silicate and zinc borate.

16. The method according to claim 14, wherein a proportion of the inorganic binder in the molding material falls within a range of approximately 8.0 to 13.0 weight % inclusive.

5 17. The method according to claim 14, wherein the inorganic fiber has a length in a range of 20 to 150 μm inclusive, and a proportion of the inorganic fiber in the molding material falls within a range of approximately 2.0 to 7.0 weight % inclusive.

10 18. The method according to claim 14, wherein a proportion of the magnetic material in the molding material falls within a range of approximately 80 to 90 weight % inclusive.

15 19. The method according to claim 14, wherein the molded element is formed to have such a shape that a proportion of the molded element occupying a space of unit volume increases from a wave-incident-side end of the element to the other end.

20 20. The method according to claim 19, wherein the molded element is formed to be wedge-shaped or pyramid-shaped.

21. The method according to claim 14, wherein the molded element has a surface to which coating is applied.

25 22. An electromagnetic wave absorber comprising:
a wave absorber molded element made of a molding material and

making up part of the wave absorber;

a plate-shaped wave absorbing section having surfaces one of which is located adjacent to an end of the molded element opposite to a wave incident side; and

5 a wave reflector located adjacent to the other one of the surfaces of the wave absorbing section, wherein

the molding material includes a magnetic material, an inorganic fiber and an inorganic binder, and

the molding material first exhibits fluidity when the magnetic material,
10 the inorganic fiber and the inorganic binder are mixed with water, and then exhibits a curing reaction in a temperature range of approximately 1 to 40 °C inclusive.

23. The wave absorber according to claim 22, wherein the inorganic
15 binder includes soluble alkaline silicate and zinc borate.

24. The wave absorber according to claim 22, wherein a proportion of the inorganic binder in the molding material falls within a range of approximately 8.0 to 13.0 weight % inclusive.

20

25. The wave absorber according to claim 22, wherein the inorganic fiber has a length in a range of approximately 20 to 150 μm inclusive, and a proportion of the inorganic fiber in the molding material falls within a range of approximately 2.0 to 7.0 weight % inclusive.

25

26. The wave absorber according to claim 22, wherein a proportion of

the magnetic material in the molding material falls within a range of approximately 80 to 90 weight % inclusive.

27. The wave absorber according to claim 22, wherein the molded
5 element has such a shape that a proportion of the molded element occupying a space of unit volume increases from a wave-incident-side end of the element to the other end.

28. The wave absorber according to claim 27, wherein the molded
10 element is wedge-shaped or pyramid-shaped.

29. The wave absorber according to claim 22, wherein the molded element has a surface to which coating is applied.

15 30. The wave absorber according to claim 22, wherein the wave absorbing section is made of sintered ferrite.